

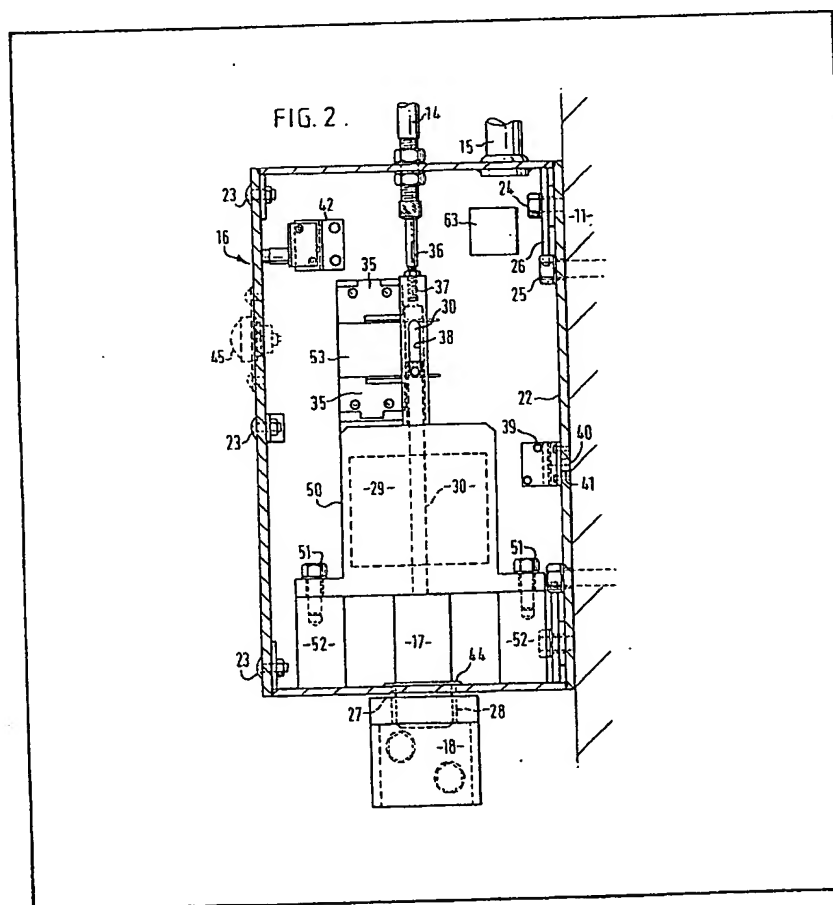
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(54) Lock

(57) A fastening is provided for use in security arrangements comprising a housing body (16) mountable in working relationship with the keeper plate (18). The body houses a bolt (17) movable into a position in which it engages with an aperture (28) in the keeper plate, and has remote control means at a location (13). Means are provided to indicate at the remote location, when the bolt is in its fastening position. The bolt is moved to its locking position by operation of a

solenoid (29) energised by a wired or wireless connection. In addition a mechanical linkage (14) is provided enabling an operator at the remote location (13) to override the electrical operation of the system.

Microswitches (35) are actuated by a pin carried by push-rod (30) to indicate the state of the bolt. Other microswitches (39, 42) connected to alarms are sensitive to attempts to prise the housing away from the wall and to remove the cover (16) respectively. In addition, seal (44) prevents attack on the bolt by chemicals.



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FIG. 1.

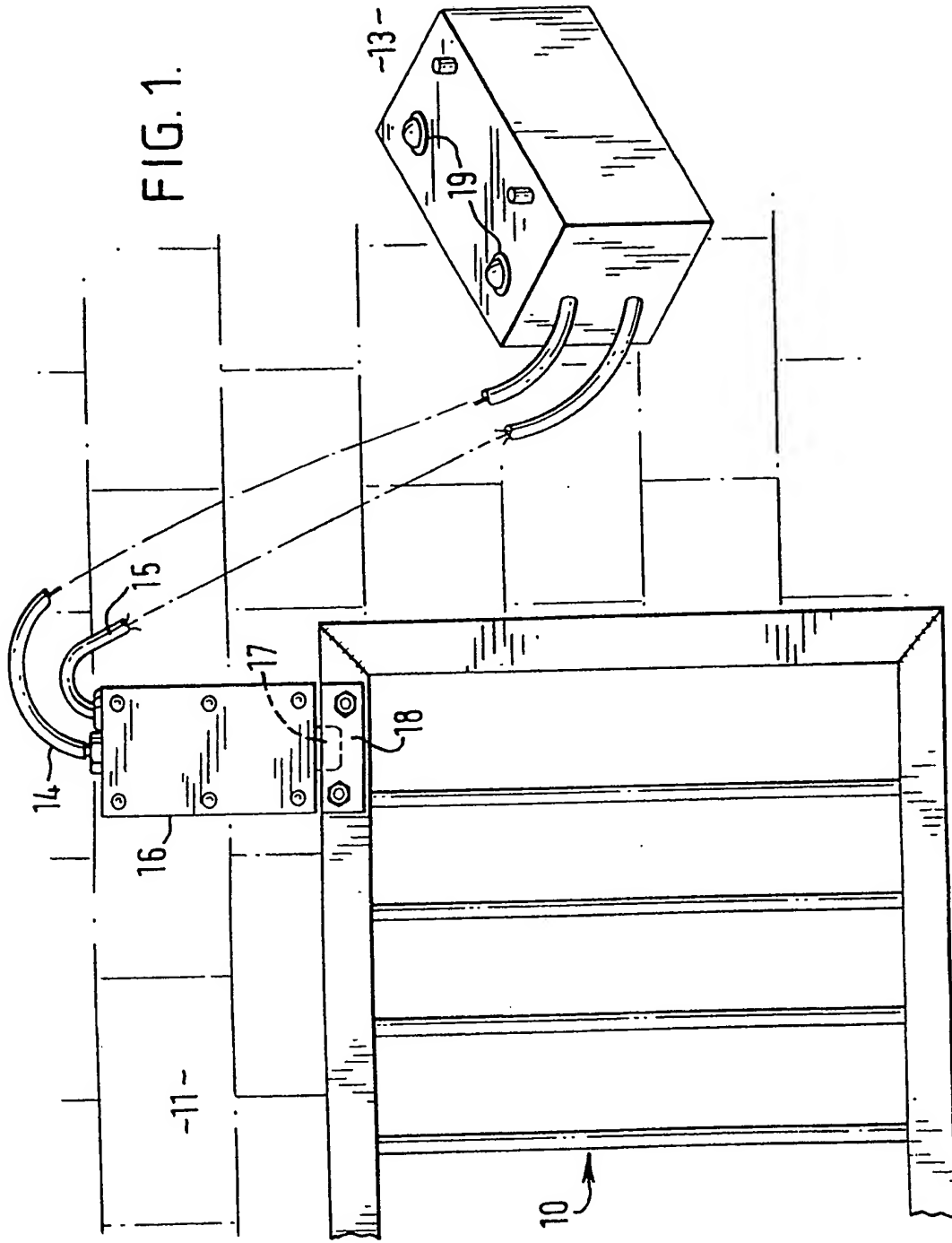


FIG. 2.

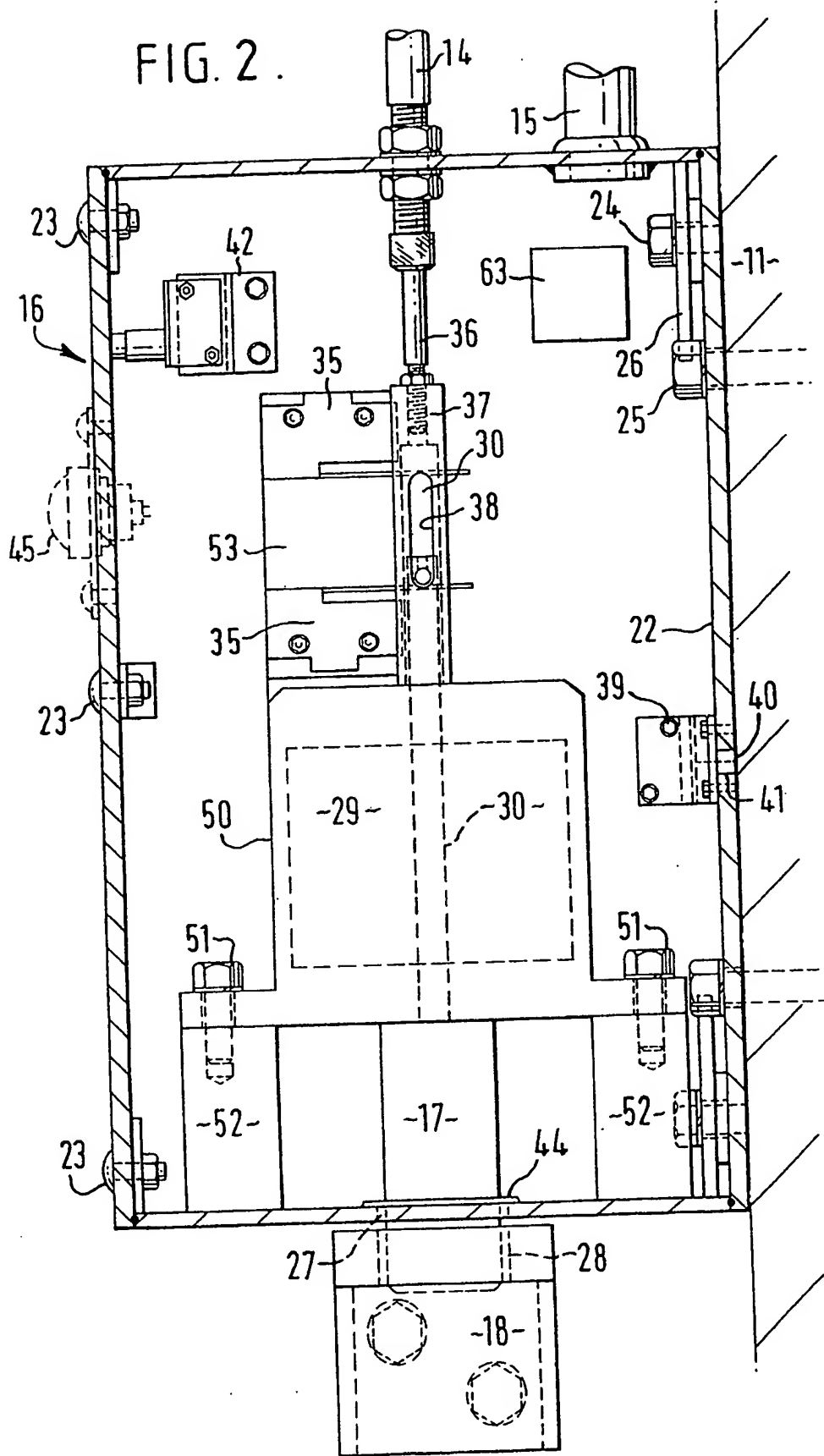
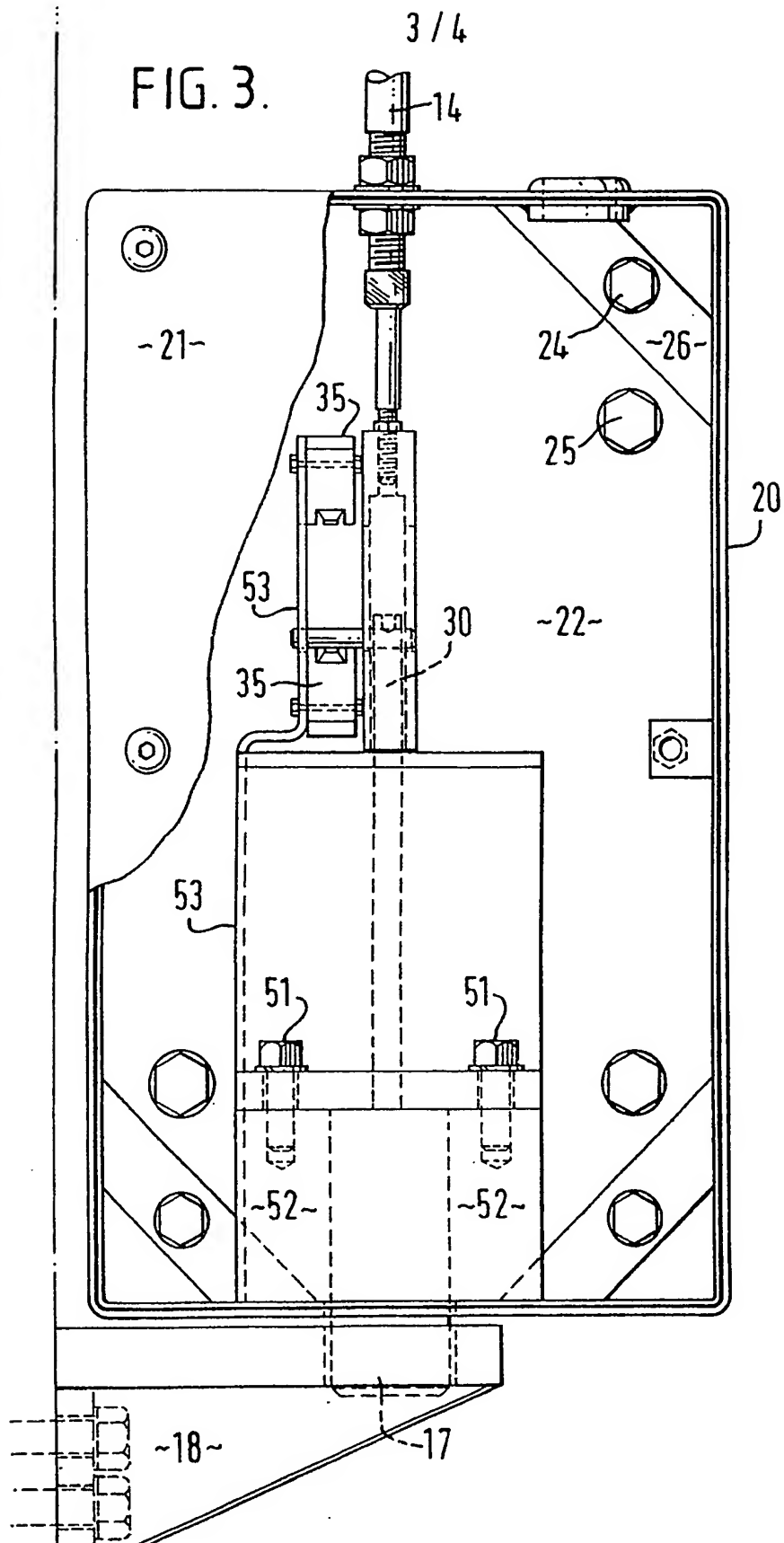


FIG. 3.



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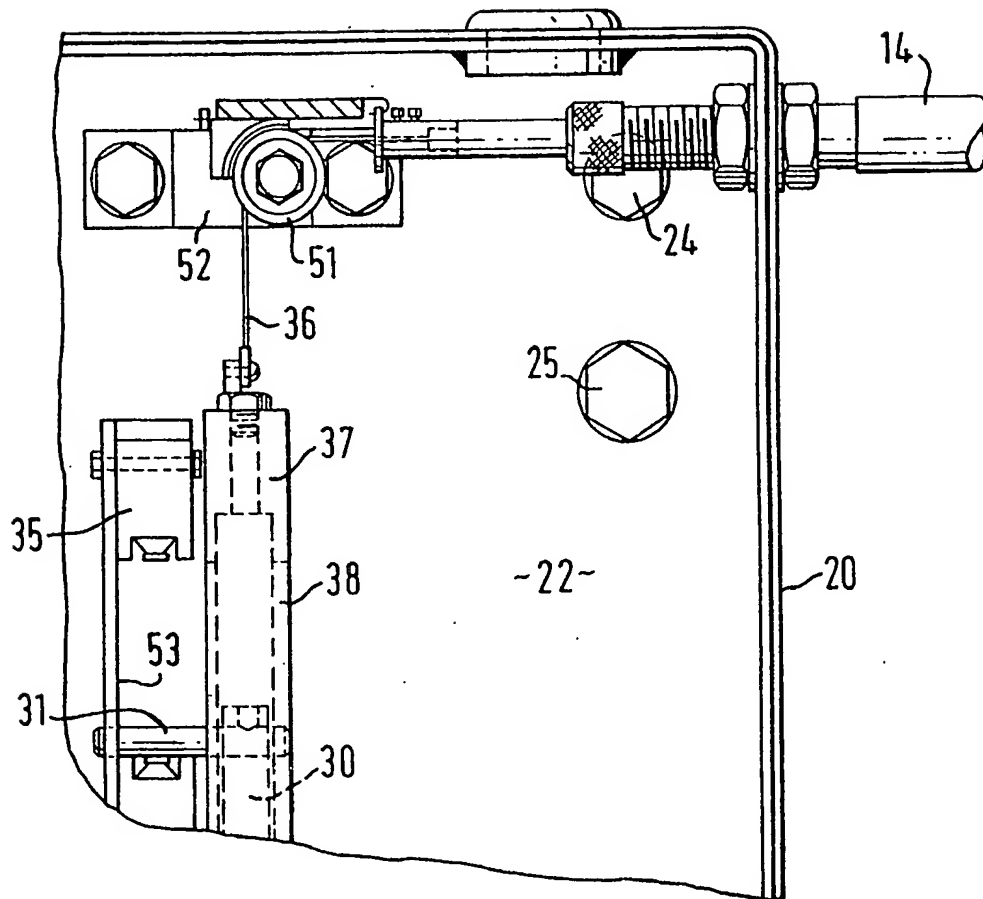


FIG. 4.

SPECIFICATION

Locks

5 The invention concerns locks, particularly but not exclusively security locks for use with heavy door and/or gates which are slidably or hingably mounted.

A number of different types of security locks are known for ensuring the security of doors and/or gates at sensitive locations – for example entrances to bank vaults or prisons. These locks are normally operable (for example with use of a key) by an operator at the lock site. This can be a severe drawback in certain circumstances; - e.g. when an operator may be power-
15 less to resist physical threats and forced to open the gate or door.

Objects of the present invention include the provision of a lock operable from a location remote from the lock site, which lock gives to an operator at the remote location an indication of the status of the lock (whether or not the lock is locking) and which will further provide an alarm indication if any attempt is made to tamper with the lock or remove it from the position in which it is mounted.

25 According to the invention we provide a lock comprising a lock body mountable in locking relationship with a keeper or striker plate, the lock body including a lock bolt movable from wholly within the lock body to a locking position in which the lock bolt partially extends from the lock body, the lock bolt when in its locking position being engagable in an aperture within the keeper plate, the lock further including control means operable from a location remote from the lock body to move the lock bolt into
30 its locking position and means for indicating, at the remote location, when the lock bolt is in its locking position.

With advantage the lock bolt is movable to a locking position by a solenoid coupled to the bolt, the control means comprising electrical circuitry within the lock body and at the remote location which is operable to cause energisation of the windings of the solenoid to drive the lock bolt into the locking position.

The control means may include wired or wireless coupling extending from the remote location to the lock site.

With advantage the lock bolt is coupled directly to the solenoid thrust rod, the arrangement being such that energisation of the windings of the solenoid
50 causes movement of the thrust rod and the lock bolt. Means being provided to monitor the position of the thrust rod (and therefore of the lock bolt).

An advantageous feature of the invention provides that in addition to the above noted control means there are mechanical means interconnecting the lock and the remote location by use of which an operator at the remote location may mechanically cause the lock bolt to be moved out of its locking position.

Preferably the body of the lock embodying the present invention includes means for giving an alarm if the integrity of the body is breached or if an attempt is made to lift the body from the position in which it is mounted.

The above and other features of the invention will become apparent from the following description of a

lock embodying the invention made with reference to the accompanying drawings, in which:-

Figure 1 illustrates schematically a security arrangement including a lock embodying the invention,

70 Figure 2 is a side elevational view of the lock of Figure 1,

Figure 3 is a front view of the lock of Figure 1, with part of a front cover plate removed, and

Figure 4 is a partial front view of an alternative form of the lock shown in Figure 1.

75 Within the security arrangement illustrated in Figure 1, and including a lock embodying the present invention, there is shown a sliding gate 10 used to shut an entrance in a wall 11. The gate 10 is locked in its closed position by operation of a lock 12 from a remote location 13 (e.g. a control room). Interconnection or communication between the remote location and the lock site is provided by a mechanical linkage 14 and an electrical wired or wireless linkage 15. The lock 12
80 comprises a lock body 16 mounted on the wall 11 and housing a lock bolt 17 which is engageable (when the gate is closing the entrance in the wall) in a keeper or striker plate 18 carried on the gate 10.

The position of the lock bolt 17 is indicated at remote location 13 by indicators such as lamps 19.

Figures 2 and 3 illustrate in more detail the lock 12 and show the lock body 16 to comprise a casing 20 having a front cover 21 and a back plate 22. The casing 20, front cover 21 and back plate 22 are formed of mild
95 steel or any other suitable material. The front cover 21 is bolted as shown at 23 to the casing 20 whilst the back plate 22 is secured to casing 20 by internal bolts 24. Bolts 25 pass through the back plate 22 to secure the lock body 16 to the wall 11.

100 The casing is formed with rounded corners as shown and is provided with strengthening bars 26 as indicated.

The lock bolt 17 provided within lock body 16 is movable through an aperture 27 in the bottom of the casing 20 into a locking position. When in its locking position bolt 17 can enter into a slot 28 in the striker plate 18 carried on gate 10.

The aperture or slot in striker plate 18 is machined blind to eliminate the lock bolt being forced, and the striker plate is mounted in gate 10 with minimum clearance between it and the lock body 16 to reduce opportunities for tampering with the keeper plate of the lock body.

The lock bolt 17 is moved by operation of a solenoid 29 to the thrust rod 30 of which the lock bolt is rigidly fixed. Electrical energisation of the windings of solenoid 29 causes thrust rod 30 to move and in turn move the lock bolt 17.

Energisation of the windings of solenoid 29 with a voltage of one polarity will move the lock bolt 17 to a locking position (that is to say move it downwardly as viewed in the Figures) whilst reversal of the polarity of the energising voltage applied to the windings of solenoid 29 will cause thrust rod 30 to move in the other direction and the lock bolt to be withdrawn into the lock body 16.

The lock is powered with a 24 volt D.C. supply (although any other suitable electrical supply may be used) and all power and signalling cables to and from the lock are run through a reinforced conduit 15
130

passing along or through the wall 11 on which the lock body 16 is mounted to the remote control location 13. This cabling is shown to pass into the lock body via the top of casing 20 in Figures 2, 3 and 4, however it will be appreciated that any entry position may be chosen to suit particular site conditions.

Thrust rod 30 extends through the solenoid winding 29 and its other end carries a pin 31. Inductive proximity switches 35 are provided which monitor the position of the thrust rod 30 (by monitoring the position of a pin 31 attached thereto) and are used to give an indication at the remote location 13 of the position of the lock bolt 17.

In the case of component failure—or power failure—the lock is fitted with a manual override system operable from the remote location 13. This override system comprises a mechanical linkage in the form of a cable 36 entering the lock body 16 from above (as shown in Figures 1 and 2) or from one side (as shown in Figure 4), the point of entry being chosen to suit particular site conditions. The cable 36 is coupled to the solenoid thrust rod by a slider 37. Slider 37 includes a slot 38 in which the pin 31 lies. An operating lever at the remote location 13 may be used to lift the slider 37 until the pin 31 bears against the lower end of slot 38 further movement of the cable 36 will cause the thrust rod 30 to be lifted and the lock bolt to be pulled into the lock body 16. The length (and routing of cable 36) is determined to suit particular site conditions.

The free movement of the slider 37 coupling cable 36 to thrust rod 30 via the pin 31 is approximately 50 mm.

A microswitch 39 is provided within the lock body 16 mounted on the back plate 22. The toggle 40 of the microswitch 39 passes through an aperture 41 in back plate 22 to engage against the wall 10 on which the lock body is mounted. The microswitch 39 is normally biased, by the contact of its toggle 40 with wall 10, into a condition holding an alarm circuit in an OFF state. Any attempt to lift the lock body 16 away from wall 10 causes microswitch 39 to switch to its other condition and causes an alarm to be generated at the remote location 13.

Another microswitch 42 is provided within the lock body 16 mounted on the casing 20. Switch 42 is biased into one condition by the front cover 21 when that cover is properly fitted. Any attempt to remove front cover 21 releases microswitch 42 which, as with microswitch 39, is arranged to generate an alarm signal at the remote location 13.

As can be seen from Figure 1 gaskets 43 are provided between the mating surfaces of the casing 20, the front cover 21 and the back plate 22. In addition an airtight seal 44 is provided to surround the lock bolt 17 as shown. When mounting the lock the gaskets 43 and seal 44 are provided to hermetically seal the interior of the lock body 16 and to prevent possibly corrosive substances being introduced to the interior of the lock body 16.

In addition to providing an indication at the remote location 13 (lamps 19) of the position of the lock bolt 17 the lock body 16 may, optionally, be provided with a lamp 45 for indicating when the lock bolt 17 is in a locking position.

A yoke 50 is provided bolted at 51 to two posts 52

welded to the bottom wall of casing 20. Yoke 50 acts to support solenoid 29 and guide lock bolt 17 into and out of the locking position. Yoke 50 also acts as a support for plate 53 on which the switches 35 are mounted.

Figure 4 illustrates a modified form of the lock shown in Figure 1 in which the entry of cable 36 to the lock body at 60 is through one side of casing 20 rather than its top.

In this cable 36, after passing through the side wall of the casing, passes around a pulley 61 mounted a pulley stand 62 fixedly attached to the back plate 22 of the lock body 16.

When using the arrangement shown in Figure 4 it has been found desirable to provide a return spring tending to bias the lock bolt 17 away from the locking position to aid operation of the lock from the remote location. Other parts of the lock shown in Figure 4 are as described with reference to Figures 2 and 3 and will not further be described.

It will be appreciated that a number of additions and/or modifications may be made to the described arrangement without departing from the scope of the present invention.

For example it is to be noted that the gaskets 43 and seal 44 provide hermetic sealing for the lock body. Thus it is possible that when the lock body is mounted in position the interior of the casing be pressurised to a superatmospheric pressure level. In this case a pressure sensor (e.g. sensor 63) located within the lock body will generate a signal indicative of the actual pressure therein and electrical circuitry (not shown) may be provided which is arranged to generate an alarm indication at the remote location 13 should the pressure within the lock body fall thus indicating that the integrity of the lock body has been breached.

Although described above with wired connections between the lock body 16 and the remote location 13 it will be appreciated that a wireless connection may be used. In such circumstances a small R.F. signal receiver (not shown) would be provided within the lock body 16, which receiver is operable in response to receipt of a particular coded radio signal (sent thereto from a transmitter at the remote location 13) to energise the windings of solenoid 29. In such a case power to the parts of the lock within the lock body would be provided by batteries (not shown).

As described solenoid 29 is powered to drive the lock bolt 17 both into and out of its locking position. It is envisaged that the arrangement could be modified such that lock bolt 17 is normally biased into (or out of) its locking position by a large spring (not shown), solenoid 29 being energised to drive the lock bolt 17 out of (or into) its locking position only when it is required to open (or lock) gate 10. In this way de-energisation of solenoid 29 (for example during a power failure) would have the result that the lock bolt 17 automatically moves into (or out of) its locking position.

The optional indicator lamp 45 which may be provided on the front cover of the lock body 16 gives an indication to anyone at the lock site of the status of the lock. This lamp also aids installation and maintenance of the lock, however in conditions where maximum security is desired lamp 45 may (if it is provided) be disconnected after mounting so that

after mounting there is no visible indication at the lock site of the status of the lock.

The proximity switches 35 which sense (and provide an indication) of the position of lock bolt 17 may be used not only to indicate the status of the lock but also, if solenoid 29 is used to drive the lock bolt 17 to both locked and unlocked positions, to alter the polarity of the power supply to the solenoid 29. Thus an operator at the remote location 13 would merely need to operate a single push button to operate the lock.

The proximity switches 35 are, we prefer, inductive proximity switches but any sort of limit or microswitch may be utilised.

In certain circumstances the lock body 16 may be provided with controls enabling a user at the lock site to open or close gate 10 without recourse to an operator at remote location 13.

Although the lock body 16 is described as being mounted on a wall and cooperating with a striker plate on a sliding gate it will be appreciated that the lock now proposed may be used with a hinged gate or door and that the positions of the lock body and striker plates may be reversed. It will further be appreciated that the lock body and/or keeper plate may be mounted within the wall (or gate) and gate (or wall) respectively.

Although description is given of a front cover 21 which is bolted onto the casing 20 it will be appreciated that the front cover may be provided as hingably mounted door to the lock body 16 which is itself lockable in a closed position.

Although not particularly described it will be appreciated that readily available fuse or circuit breaker protection is provided for each of the electrical elements described above.

Again it will be appreciated that although the power to the lock is described as being via a 24 volt D.C. supply any other direct current supply may be utilised, or even an alternating current supply being provided with suitable rectification equipment provided within the lock body 16.

Finally it should be noted that the lock is formed of elements of substantial mass which of themselves aid the overall security of the entrance being secured with it. If the lock body, as illustrated, is placed above a sliding gate to engage a keeper or striker plate in the top of the gate then lock acts to retain the gate in its guide channel should any attempt be made to lift the gate therefrom.

It will be appreciated that the above described arrangement provides a lock operable from a remote location and which provides at the remote location an indication of the status of the lock. The lock is described as being electrically operated but mechanical linkages are provided between the lock and the remote location enabling the lock to be operated when there has been a power failure.

CLAIMS

1. A lock comprising a lock body mountable in locking relationship with a keeper or striker plate, the lock body including a lock bolt movable from wholly within the lock body to a locking position in which the lock partially extends from the lock body, the lock bolt when in the locking position being engageable in an aperture within the keeper plate, the lock further

including control means operable from a location remote from the lock body to move the lock body into the locking position and means for indicating, at the remote location, when the lock is in its locking position.

2. A lock as claimed in claim 1, wherein the lock bolt is moved into a locking position by a solenoid coupled to the lock bolt, wherein said control means comprises electrical circuitry within the lock body and at the remote location operable to cause power to be fed to the windings of the solenoid so as to drive the lock bolt into a locking position.

3. A lock as claimed in claim 2, in which said control means includes a wired coupling extending from the remote location to the lock body.

4. A lock as claimed in claim 3, wherein said control means includes a R.F. receiver within the lock body, which receiver is operable in response to a particular coded signal generatable at the remote location to energise the solenoid winding to cause the lock bolt to be moved to a locking position.

5. A lock as claimed in any one of claims 2, 3 and 4, wherein the coupling between the solenoid and the lock bolt is by a direct coupling of the lock bolt to the solenoid thrust rod, the arrangement being such that energisation of the windings of the solenoid causes movement of the thrust rod and the lock bolt, and said indicating means comprising means operable to sense the position of the thrust rod and therefore of the lock bolt.

6. A lock as claimed in any of claims 1 to 5, further including mechanical means interconnecting the lock and the remote location by use of which an operator at the remote location can mechanically cause the lock bolt to move out of its locking position.

7. A lock as claimed in any of the claims 1 to 6, further including integrity checking means operable to initiate an alarm at the remote location if the integrity of the lock body is breached, or if the lock body is lifted from its mounting position.

8. A lock as claimed in claim 7, wherein said integrity checking means includes electrical switches biased into a first condition by the fixture of the front cover onto the lock body, and by the mounting of the lock body in its mounting position, removal of the front cover, or of the lock body from its mounting position, causing said switches to move to their other conditions and generate an alarm indicating signal.

9. A lock as claimed in claim 7 or claim 8, wherein the lock body is hermetically sealed and, at installation, is pressurised, a pressure sensor being provided within the lock body which is operable to provide an alarm indication should the pressure therein fall.

10. A lock substantially as hereinbefore described with reference to the accompanying drawings.

11. A security arrangement including a lock as claimed in any of claims 1 to 11 and as described herein.

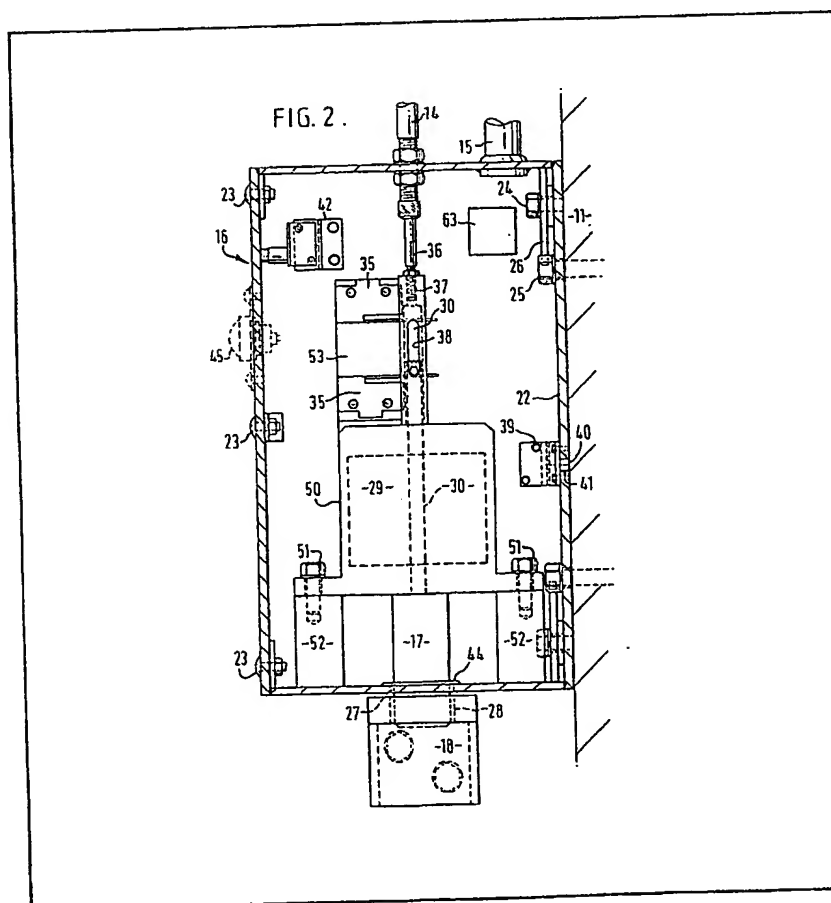
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solenoid (29) energised by a wired or wireless connection. In addition a mechanical linkage (14) is provided enabling an operator at the remote location (13) to override the electrical operation of the system.

Microswitches (35) are actuated by a pin carried by push-rod (30) to indicate the state of the bolt. Other microswitches (39, 42) connected to alarms are sensitive to attempts to prise the housing away from the wall and to remove the cover (16) respectively. In addition, seal (44) prevents attack on the bolt by chemicals.



1. The presente invention relates to the partitions of the type with double panels letting remain between-them a space often used to place an insulator, to make pass from the electric or different raceways.

Currently to assemble such partitions one uses many fasteners in particular sections with use of smooth, posts, splice plates, etc. Some shaped members are intended to form the framework of the partition, and others, the visible parts, such as the plinths, stringcourses, vertical weather stripping, splice plates. One could say that the whole profile is the frame and that could also be said of the framework and the visible parts. Currently one produces thin sheet frames consisted of a relatively high number of models of very complex shapes, but these frames are inappropriate for partitions with double panels. Moreover, at the time of assembly, the fitters must use many complementary independent parts, in particular a variety of clips.

1. La presente invention concerne les cloisons du type à double panneaux laissant subsister entre-eux un espace souvent utilisé pour loger un isolant, faire passer des canalisations électriques ou autres.

Actuellement pour monter de telles cloisons on utilise de nombreux éléments d'assemblage notamment des profilés à usage de lisses, poteaux, couvre-joints, etc. Certains profilés sont destinés à former l'ossature de la cloison, et d'autres, les parties visibles, telles que les plinthes, bandeaux, calfeutrement verticaux, couvre-joints. Dans le pressent mémoire, on appelle charpente l'ensemble des profiles, c'est-à-dire à la fois l'ossature et les parties visibles. Actuellement on réalise des charpentes en tôle peu épaisse constituées d'un nombre relativement élevé de modèles de profilés très complexes, mais ces charpentes conviennent mal aux cloisons à double panneaux. De plus, lors du montage, les installateurs doivent utiliser de nombreuses pièces indépendantes complémentaires, notamment des clips variés.

2 According to the invention one obviates these disadvantages by carrying removable partitions with double panels fixed with masonry and between-them out using elements profiled out of sheet; this constraint is obtained using three categories of elements: smooth, posts, splice plates; smooth fixed on the ground, identical ceiling and wall all and consisting of two profiled in "U" of fixed widths different one in the other in order to determine between their wings two side throats in which one embeds the edges of the panels; the posts made up of two identical sections form two cavity exchanges fixed back at back and a cavity at

each end determining a longitudinal slit, the whole being of a width slightly lower than the distance ranging between the wings of the small section of the smooth; the splice plates constitutes of only one section form at the same time the visible beach and the clip placed under it, clip which one embeds in the slit of the corresponding post.

The elements consist of galvanized and/or cold prelacquered steel sections, which one cuts to the desired length.

2 Selon l'invention on obvie à ces inconvénients en réalisant des cloisons amovibles à double panneaux assujettis à la maçonnerie et entre-eux à l'aide d'éléments profilés en tôle; cet assujettissement est obtenu à l'aide de trois catégories d'éléments : lisses, poteaux, couvre-joints; les lisses fixées au sol, plafond et mur étant toutes identiques et constituées de deux profilés en "U" de largeurs différentes fixes l'un dans l'autre de façon à déterminer entre leurs ailes deux gorges latérales dans lesquelles on encastre les bordures des panneaux; les poteaux constitués de deux profilés identiques forment deux évidement centraux fixés dos à dos et un évidement à chaque extrémité déterminant une fente longitudinale, le tout étant d'une largeur légèrement inférieure à la distance comprise entre les ailes du petit profilé des lisses; les couvre-joints constitués d'un seul profilé forment à la fois la plage visible et le clip placé sous elle, clip qu'on encastre dans la fente du poteau correspondant.

Les éléments sont constitués de profilés à froid en acier galvanisé et/ou prélaqué, que l'on coupe à la longueur désirée.

3 The "U" profiles constituting the smooth component (stringer) comprise each one in their content an open axial cavity to the bottom, of dimensions such as the cavity of the small section is used as housing with the vein corresponding to the cavity of the large section, this last cavity being filled of an elastic band. Thus at the time of the installation of the small section in the large one, the cavities are used as guidance.

The whole of the two shaped profiles form a single element being used at the same time of framework and visible parts. According to the position of the stringer, the flat portions (beaches) external of the wings of the large section are used of plinths, stringcourses or vertical weatherstripping.

The framework of the partition comprise posts to be placed between two smooth (panels) facing (between ground and ceiling) and each post consists of two identical sheet sections forming two dovetail central cavities, fixed back at back

and a cavity at each end, presenting a longitudinal passage (slit), this passage is delimited by the free edges facing of sheets constituting the sections, and determining slightly elastic wings along the known as passage.

3 Les profilés en "U" constituant la lisse comportent chacun dans leur fond un évidement axial ouvert vers le bas, de dimensions telles que l'évidement du petit profilé sert de logement à la nervure correspondant à l'évidement du grand profilé, ce dernier évidement étant rempli d'une bande élastique. Ainsi lors de la mise en place du petit profilé dans le grand, les évidements servent de guidage.

L'ensemble des deux profilés forment un élément unique servant à la fois d'ossature et de parties visibles. Selon l'emplacement de la lisse, les plages extérieures des ailes du grand profilé servent de plinthes, de bandeaux ou de calfeutrement vertical.

L'ossature de la cloison comportent des poteaux à placer entre deux lisses se faisant face (entre sol et plafond) et chaque poteau est constitué de deux profilés identiques en tôle formant deux cavités centrales en queue d'aronde, fixés dos à dos et une cavité à chaque extrémité, présentant un passage (fente) longitudinal, ce passage est délimité par les bordures libres se faisant face des tôles constituant les profilés, et déterminant des ailes légèrement élastiques le long du dit passage.

4 The width of both profiled post is equal or slightly lower than the width of the small section in "U" of the smooth panel (stringer).

The splice plate is also a sheet section comprising a visible planar section (beach) (external) and a longitudinal clip hidden below. On each side of the beach, the sheet was folded back flat until the medium, then folded up (towards the interior) in the shape of "V", with however lips directed towards the axial plan in order to facilitate the introduction of the clip into the slit of the amount. The height of "V" is a function thickness planned for the panels. For better rendering comprehensible the invention it is given hereafter an example of realization in reference to the annexed drawings in which:

4 La largeur des deux profilés du poteau est égale ou légèrement inférieure à la largeur du petit profilé en "U" de la lisse.

Le couvre-joint est également un profilé en tôle comportant une plage (extérieure) visible et un clip longitudinal caché dessous. De chaque côté de la plage, la tôle a été rabattue à plat jusqu'au milieu, puis repliée (vers l'intérieur) en forme de "V", avec toutefois des lèvres dirigées vers le plan axial de façon à faciliter l'introduction du clip dans la fente du montant. La hauteur du "V" est fonction de l'épaisseur prévue pour les panneaux. Pour mieux faire comprendre l'invention il est donné ci-après un exemple de réalisation en référence aux dessins annexés dans lesquels:

Fig. 1 represents a stringer cross-section,

Fig. 2 represents a post cross-section,

Fig. 3 and 4 show assemblies with glazing.

The stringer represented in fig. 1 consists of first profiled in "U" referred 1 in which is fixed by any known means second profiled in "U", 2, of lower width and appreciably less height, two thicknesses of sheet approximately. The base of each section comprises a recess 1', 2'. These recesses are mouldable (encastrables) and determine under the support beam (stringer) a cavity filled of elastic material (an elastic band) 59. Between the wings of sections 1 and 2 one sees throats 3 and 4 in which panels 5 and 6 are committed. In the lower stringer these panels rest on holds 5' -6 '. In the others smooth the throats are advantageously filled by a joint foams ensuring a good insulation.

5 Fig. 1 représente une lisse en coupe,

Fig. 2 représente un poteau en coupe,

Fig. 3 et 4 montrent des montages avec vitrage.

La lisse représentée en Fig. 1 est constituée d'un premier profilé en "U" référencé 1 dans lequel est fixé par tout moyen connu un deuxième profilé en "U", 2, de largeur plus faible et de hauteur sensiblement moindre, de deux épaisseurs de tôle environ. La base de chaque profilé comporte un renforcement 1', 2'. Ces renforcements sont encastrables et déterminent sous la lisse un évidement rempli d'une bande élastique 59. Entre les ailes des profilés 1 et 2 on voit des gorges 3 et 4 dans lesquelles sont engagés les panneaux 5 et 6. Dans la lisse inférieure ces panneaux reposent sur des cales 5'-6'. Dans les autres lisses les gorges sont avantageusement remplies par un joint mousse assurant une bonne isolation.

6 Both shaped 1 and 2 are integral (indissociable) and constitute the high stringer or a low, which is provided on its bottom with an insulating elastic material (band), preferably self-adhesive foam band. This element can also be fixed on a vertical wall at the beginning of a partition.

The fig. 2 shows the post consisted two identical sections 7-7' out of sheet, assembled back with back by their central planar member (beach) 8-8'. Of each with dimensions of is this beach, the sheet folded with more than 90° to determine a cavity 9 (or 9') of dovetail type. Then is the sheet folded approximately to 90° to determine a planar section (beach) 10-11 (or 10' -11

inclines '), then with sharp angle to form wings 12-13 (or 12' -13 ') perpendicular to beaches 8 (or 8 '). On a side the edges or lips 14-14 ' facing determine slit 15, and other side edges 16-16 ' facing determine slit 17.

6 Les deux profilés 1 et 2 sont indissociables et constituent la lisse haute ou basse, laquelle est munie sur son fond d'une bande élastique isolante, de préférence une bande mousse autocollante. Cet élément peut aussi être fixé sur un mur vertical au départ d'une cloison.

La Fig. 2 montre le poteau constitué par deux profilés identiques 7-7' en tôle, assemblés dos à dos par leur plage centrale 8-8'. De chaque côté de cette plage, la tôle est pliée à plus de 90° pour déterminer un évidement 9 (ou 9') de type queue d'aronde. Ensuite la tôle est pliée environ à 90° pour déterminer une plage incline 10-11 (ou 10'-11'), puis à angle vif pour former des ailes 12-13 (ou 12'-13') perpendiculaires aux plages 8 (ou 8'). D'un côté les bordures ou lèvres 14-14' se faisant face déterminent la fente 15, et de l'autre côté les bordures 16-16' se faisant face déterminent la fente 17.

7 In fig. 2 it can be seen that the splice plate 18 comprises a central beach 19 pennies which, and on the two sides 20-21, the sheet is folded back roughly to the axis where it is folded to determine branches 22-23 of a "V". Ends 24-25 of these branches are folded up towards the interior of "V" slightly elastic and allowing the clipage of the whole of the splice plate on the post. Symmetrically one finds one covers joint 18' rigorously identical to splice plate 18.

For the installation of the partition one fixes initially the smooth and the posts. If only one height of panel is placed between the ground and the ceiling, this height must be equal to the distance ground-ceiling decreased height of a stringer or slightly more. One threads initially the higher edge of a panel in a throat of the higher stringer by compressing the band which is there, then one pushes back the panel and one lets it slip into the corresponding throat of the lower stringer where it rests on the tapes or rules with use of holds envisaged for this purpose, which makes it possible to make adjustment for (catch up with, with the implementation, of) dimensional deviations.

7 La Fig. 2 montre également le couvre-joint 18 qui comporte une plage centrale 19 sous laquelle, et des deux côtés 20-21, la tôle est rabattue approximativement jusqu'à l'axe où elle est pliée pour déterminer les branches 22-23 d'un "V". Les extrémités 24-25 de ces branches sont repliées vers l'intérieur du "V" légèrement élastique et permettant le clipage de l'ensemble du couvre-joint sur le poteau. Symétriquement on trouve un couvre joint 18' rigoureusement identique au couvre-joint 18.

Pour la mise en place de la cloison on fixe d'abord les lisses et les poteaux. Si une seule hauteur de panneau est placée entre le sol et le plafond, cette hauteur doit être égale à la distance sol-plafond diminuée de la hauteur d'une lisse ou légèrement plus. On enfle d'abord le bord supérieur d'un panneau dans une gorge de la lisse supérieure en comprimant la bande qui s'y trouve, puis on repousse le panneau et on le laisse glisser dans la gorge correspondante de la lisse inférieure où il repose sur les bandes ou règles à usage de cales prévues à cet effet, ce qui permet de rattraper, à la mise en oeuvre, des écarts dimensionnels.

8 The height of these holds is variable according to the variations and is generally appreciably equal to half the height of the stringer. To maintain the edges of panels applied to the amounts the splice plates are used.

Thus panel 26 being in place, its vertical edge comes to apply to the wing 12 where it is retained by the splice plate 18 which also retains panel 27. In the same way panels 28-29 are applied to wings 13-13' and are retained by splice plate 18'. Advantageously between panels 26-28 and 27-29 is placed insulating, such as volcanic rockwool.

The shaped structural members according to the invention have the advantage of elasticity. Thus by introducing the clip of a splice plate 18 into slit 15 of a post, one widens known as slit 15 appreciably while are tightened branches 22-23 of the "V" of the clip.

8 La hauteur de ces cales est variable en fonction des écarts et est généralement sensiblement égale à la moitié de la hauteur de la lisse. Pour maintenir les bordures de panneaux appliquées sur les montants on utilise les couvre-joints.

Ainsi le panneau 26 étant en place, sa bordure verticale vient s'appliquer sur l'aile 12 où elle est retenue par le couvre-joint 18 qui retient également le panneau 27. De même les panneaux 28-29 sont appliqués sur les ailes 13-13' et retenus par le couvre-joint 18'. Avantagement entre les panneaux 26-28 et 27-29 est placé un isolant, tel que de la laine de roche volcanique.

Les éléments de charpentes profilés à froid selon l'invention présentent l'avantage de l'élasticité. Ainsi en introduisant le clip d'un couvre-joint 18 dans la fente 15 d'un poteau, on élargit sensiblement la dite fente 15 pendant que se resserrent les branches 22-23 du "V" du clip.

9 Then after installation, on the one hand branches 22-23 of "V", and on the other hand lips 14-14' of slit 15, take again their home position; what gets a great facility of assembly, then a very solid fixing of the unit.

The structural members described above were represented in fig. 1 and 2 for the constraint of ordinary panels, but they can be used differently and in particular for the fixing of glazing like represented in fig. 3 and 4.

The fig. 3 shows a mural stringer provided with a panel 30 with joint 31-32. Panel 30 is also a slightly elastic section with edges 30'. Pane 33 is maintained between wing 35 of section 1 and joint 31, and the same pane 34 is maintained between wing 36 of section 1 and joint 32. According to cases' the panels can be traditional or special.

9 Puis après mise en place, d'une part les branches 22-23 du "V", et d'autre part les lèvres 14-14' de la fente 15, reprennent leur position de repos; ce qui procure une grande facilité de montage, puis une fixation très solide de l'ensemble.

Les éléments de charpentes décrits ci-dessus ont été représentés en Fig. 1 et 2 pour l'assujettissement de panneaux ordinaires, mais ils peuvent être utilisés différemment et notamment pour la fixation de vitrage ainsi que repréecenté en Fig. 3 et 4.

La Fig. 3 montre une lisse murale munie d'une parclose 30 avec joint 31-32. La parclose 30 est également un profilé avec rebords 30' légèrement élastique. La vitre 33 est maintenue entre l'aile 35 du profilé 1 et le joint 31, et de même la vitre 34 est maintenue entre l'aile 36 du profilé 1 et le joint 32. Selon les cas les parcloles peuvent être classiques ou spéciales.

10 With the base of the fig. 4 one represented subjugated panes 33-34 with a post such as previously described. A panel 37 is fixed on section 7 and its edges take support on the wings 12 and 13. In a known way the panel is provided with the joints 38-39. The edges of the panels can be prolonged in 37' to abut (form obstinate). After installation, pane 34 is captive between joint 39 and the splice plate 18', and its installation is limited by the thrust 37'.

The device according to the invention allows deconstruction of partitions that enter at a right angle, and in particular of the partitions with double glazing.

10 A la base de la Fig. 4 on a représenté les vitres 33-34 assujetties à un poteau tel que précédemment décrit. Une parclose 37 est emmanchée sur le profilé 7 et ses bords prennent appui sur les ailes 12 et 13. De façon connue la parclose est munie des joints 38-39. Les bords des parcloles peuvent être prolongés en 37' pour former butée. Après mise en place, la vitre 34 se trouve prisonnière entre le joint 39 et le couvre-joint 18', et sa mise en place est limitée par la butée 37'.

Le dispositif selon l'invention permet deconstruire des cloisons faisant entre-elles un angle droit, et notamment des cloisons à double vitrage.

11 To this end, 7' profiles it is provided with a panel 40 with its joints 41-42. The unit constitutes the post referred 43 applied against panes 44-45 against the elastic joints 46-47 interdependent of panels 48-49 forming part of another post referred 50. Post 43 is used then as splice plate with post 50 for the constraint of the panes 44-45. To ensure the fixing of the posts between-them, one slips into cavity 51 of post 50, head 52 of a screw or of a bolt (or similar) then one makes pass his threaded rod through lights envisaged for this purpose, in panel 40 and beaches 8-8' of profile 7 7', and one screws a nut 54 of tightening. Thus two posts 43 and 50 are firmly plain, indeed head 52 supports on the thickness of wings 55-56 of profiled post 50 while the nut and/or disc of blocking 54 ensure a rigid support on the heart even of post 43.

Opposite side with the panes 44-45 post 50 is provided with panes 57-58 as that is visible with the superior part of the fig. 4.

It is possible to combine traditional panels special and glazed in the same partition.

11 A cet effet, le profile 7' est muni d'une parclose 40 avec ses joints 41-42. L'ensemble constitue le poteau référencé 43 appliqué contre les vitres 44-45 à l'encontre des joints élastiques 46-47 solidaires des parcloes 48-49 faisant partie d'un autre poteau référencé 50. Le poteau 43 sert alors de couvre-joint au poteau 50 pour l'assujettissement des vitres 44-45. Pour assurer la fixation des poteaux entre-eux, on glisse dans l'évidement 51 du poteau 50, la tête 52 d'une vis ou d'un boulon (ou similaire) puis on fait passer sa tige filetée à travers des lumières prévues à cet effet, dans la parclose 40 et les plages 8-8' des profiles 7 7', et l'on visse un écrou 54 de serrage. Ainsi les deux poteaux 43 et 50 se trouvent solidement unis, en effet la tête 52 appuie sur l'épaisseur des ailes 55-56 des profilés du poteau 50 tandis que l'écrou et/ou rondelle de blocage 54 assure un appui rigide sur l'âme même du poteau 43.

Du côté inverse aux vitres 44-45 le poteau 50 est muni de vitres 57-58 ainsi que cela est visible à la partie supérieur de la Fig. 4.

Il est possible de combiner des panneaux classiques spéciaux et vitrés dans une même cloison.

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